

The Most Optimal Methods for Acknowledgement of Medical Biases Toward LGBTQIA+ Patients in United States' Healthcare Facilities

Kate Mirielle Pasia (✉ kate_pasia@icloud.com)

Obra D. Tompkins High School

Research Article

Keywords: LGBTQIA+ healthcare, implicit bias, cognitive bias, homonegativity

Posted Date: July 6th, 2022

DOI: <https://doi.org/10.21203/rs.3.rs-1785702/v1>

License:  This work is licensed under a Creative Commons Attribution 4.0 International License.

[Read Full License](#)

Abstract

The United States' hospitals and healthcare facilities have long questioned the necessity of certain aspects of nondiscrimination interventions to eliminate bias against demographic differences. For healthcare providers today, many workplaces have promoted discussions and inclusion training sessions among the worker community in order to address bias and prejudicial attitudes in workers. This study set out to discover the viability of a video source as an optimal method for bias mitigation, specifically with LGBTQIA+ patients. The Implicit Correlation Test (ICT) measured the level of agreement people felt regarding LGBTQIA+ healthcare. As a result, the results showed the success and reliability of the video *To Treat Me, You Have to Know Who I Am*, to foster an alteration in perspective regarding the treatment of LGBTQIA+ patients (1). However, more research is necessary to compare the success of the implementation of a video source in bias interventions to other mitigation methods.

Introduction

The term implicit bias refers to unintended views or stereotypes that influence one's thinking, behavior, or judgment (2). Despite including both positive and negative attitudes, these are involuntary and uncontrolled. They serve an essential evolutionary function: receiving and organizing information from multiple sources to guide behavior. Implicit bias is a highly efficient information processing method and is crucial to human existence. However, its major downside may be the possibility of generating or reinforcing negative stereotypes about others based on characteristics such as race, gender, or sexual orientation. Specifically, the terms lesbian, gay, bisexual, transgender, queer/questioning, intersex, and asexual/agender (LGBTQIA+) refer to the varying sexual orientations people represent outside traditional heterosexual norms. Within healthcare, it is vital to understand the proper ways in which patients represent themselves in order to supply the best and most comfortable experience. According to the Hippocratic Oath, when becoming a physician, all graduates must state that "I [the physician] WILL NOT PERMIT considerations of...sexual orientation...or any other factor to intervene between my duty and my patient" (3). Thus, all healthcare providers agree to prohibit bias from interfering between the patient's health and the physician's personal opinions. However, as implicit biases are unintentional and physicians may be unaware of them, it is necessary to understand how these can best be mitigated in a way that does not negatively affect the patient's health.

Literature Review

This section analyzes the existing literature regarding implicit medical biases and how healthcare facilities have attempted to mitigate them. The review of the sources within the section provides historical context for the current mitigation methods and the predefined notions that have affected care in the past in terms of many demographic factors, such as race, ethnicity, and gender as well as LGBTQIA+ history and its lack of representation in healthcare. Following the evaluation of the sources, the gap within the current body of research in implicit biases in healthcare will be identified and discussed.

Sociology of Implicit Medical Biases

People of color, various sexual orientations, or differing gender identities have encountered inequities in access to healthcare, quality of care, and differences in health outcomes. These discrepancies are mainly expressed through healthcare workers' attitudes and tendencies in their practice. In G.L.A Harris' *Cultural Competence: Its Promise for Reducing Healthcare Disparities*, Harris discusses the extent to which females experience inadequate care in their diagnoses, elucidating that African American women and those of other racial or ethnic minorities are often less likely than white women to receive adequate prenatal advice (4). Within the study, Harris discovers how African American women were likely to be given similar or the same advice when talking to their healthcare providers about their pregnancies, whereas white women claimed their advice seemed to be specific to the issues they had mentioned to their providers, noting that the professionals were treating the groups in different ways. Due to the aforementioned connection between ethnicity and treatment, the claims made by Harris allude to the relationship between race, diagnosis, and treatment. As mentioned by Jacquelyn H. Flaskerud, people of the same or similar ethnic groups are more likely to receive similar diagnoses, as they all share a certain version of each other's genes (5). However, Flaskerud also mentions how this can cause inaccurate diagnoses, as some providers may utilize race as a sole symptom for the common illness and overlook a proper examination. This relationship is explored as Nariner Kapur, in *Unconscious Bias Harms Patients and Staff*, discusses where the issue of family illnesses, history, and the history of specific illnesses based upon race, similar to those mentioned by Flaskerud, plays a role in determining the given diagnoses. Kapur emphasizes the known stereotypes about priority populations and their ability to influence providers' judgment about patients and can potentially and adversely affect the provider-patient relationship and the eventual healthcare treatment outcome (6). While Flaskerud calls attention to the inaccuracies of medical diagnoses through the assumptions of racial commonalities, Kapur focuses mainly on how family and racial illnesses play a role in the diagnoses and the extent to which this is applicable for that specific person. Although this adds to the literature on how physicians may inaccurately identify and diagnose individuals, it fails to acknowledge the importance of representation and the extent to which the patient-physician relationship can prevail with existing commonalities. Additionally, the sources do not recognize the disparities in these diagnoses and the likelihood of them being either accurate or inaccurate. With this, a prevailing gap depicted in the research is the probability of these diagnoses being incorrect as well as the applicability of African American disparities to other minority populations.

History of Implicit Bias Mitigation and Homonegativity

The history of homonegativity in healthcare has demonstrated negative effects on the well-being of a patient as well as the aforementioned patient-physician relationship. According to Ralph Klotzbaug and Gale Spencer, homonegativity is a term referring to prejudicial or discriminatory attitudes toward individuals based upon sexual orientation. They allude to the barriers in care that may include delay or refusal of specific services, such as appropriate birth control and necessary immunizations (7). Highlighting the discrepancies resulting from homonegativity, Klotzbaug and Spencer identify how

access to care has been restricted for these individuals, and their claims are further supported by statistical evidence in Jennifer Kates et al.'s *Health and Access to Care and Coverage for Lesbian, Gay, Bisexual, and Transgender Individuals in the U.S.*, in which they emphasize the risk of the HIV/AIDS epidemic on the LGBTQIA+ community. The authors reveal that although the CDC recommends HIV screening for all adults, three in ten, or 30% of surveyed bisexual or gay men, claim that they have never been tested for HIV (8). This signifies the lack of access for these individuals and the detriment that it can cause to their physical health. Kates and her team further support the arguments expressed against homonegativity by Klotzbaug and Spencer, while also mentioning the specific services that are not available. In response, recent advancements in healthcare have led to the acknowledgment of biases by use of the Harvard Implicit Association Test (IAT), which assesses one's implicit biases toward attitudes, stereotypes, and self-concepts (9). However, according to Matthew Morris et al., the IAT has been primarily used for discrimination by race and ethnic groups rather than LGBTQIA+ patients (10). Furthermore, the authors elucidate that bias testing is often done while looking at explicit biases and that a major limitation in this research is the exclusion of implicit biases as well as explicit, as they both cause discrepancies in the quality of care. As a result, despite the evolution of explicit bias research, homonegativity remains to exist today, and a critical gap in this research is the failure to recognize LGBTQIA+ health as well as implicit attitudes toward this community.

Medical Effects of Implicit Medical Biases

The scientific and medical impact of implicit biases within patient-physician encounters as well as in the variation in medical diagnoses have been well-documented. According to Louis Penner, Ph.D., professor emeritus in the oncology department at Wayne State University School of Medicine in Detroit and lead author of the study, a link may exist between a physician's prejudice and their patients' trust in suggested therapies (11). The findings highlight the harmful effect of implicit bias that may depict the ability of the patient to recognize their healthcare provider's biases, and thereby are less likely to follow and trust treatment recommendations. In the same study, John Dovidio, professor of Psychology at Yale University, discovered that providers with high implicit bias were less supportive of their patients and spent less time with them than providers with low implicit bias, connecting Penner's findings to possible ethnic or racial biases. In the study, the healthcare provider's views were picked up on by black patients who thought physicians with a stronger implicit bias were less patient-centered than those with a mitigated or controlled bias. Patients also had a harder time recalling what their doctors told them, had less faith in their treatment plans, and believed it would be more difficult to stick to suggested treatments. Similarly, in a study conducted by Sara Heath, it was concluded that, according to the social identity theory, African American patients could pick up on non-verbal cues of the provider's biases, reporting that they were either physically distant or delivering unintentional, slight microaggressions (12). The social identity theory attempts to explain how the human brain predicts certain actions based upon a characterization of a specific group, and within Heath's study, this group alludes to the racial or ethnic group the participants belonged to (13). Heath reveals one example of the aforementioned stereotyping to be the clinician instructing the patient not to touch the computer before leaving the room, as well as calling another physician to come into the room with them while the examination took place. As a result, the

patients felt like they were looked down upon, affecting their abilities to trust and participate in the treatment suggestions, in similar ways to Penner's study, as the patient-physician relationship grew weaker, affecting the well-being of the patient.

Overview

While the current body of literature attempts to provide a connection between the patient-provider relationship, predefined notions, and medical stereotyping, as well as family and ethnic history in the process of diagnosis, a gap remains in the existing body of knowledge with the implementation of current mitigation methods on LGBTQIA+ populations. In this paper, I will highlight the effectiveness of attempts by health professionals to mitigate the stricter prejudices held against LGBTQIA+ patients and how these may cause long-term changes in a patient's health rather than the direct consequences of healthcare biases, centering the following paper around answering the question: To what extent can US healthcare facilities implement various programs, or procedures in order to mitigate implicit LGBTQIA+ medical biases in their healthcare professionals?

Method

This section proposes a study testing the effectiveness of a primarily anecdotal-based video on recognizing medical biases, using the Implicit Correlation Test (ICT), an instrument designed to assess the level of agreement or disagreement on a statement regarding the medical treatment and conditions of LGBTQIA+ patients. The video integrated personal experiences and opinions from those in the LGBTQIA+ community and it may be considered anecdotal-based as many underwent previous challenges in gaining proper care. The scale's format and purpose are explained and defined within this section. Moreover, the procedure is outlined and chronologically organized, attempting to pay special attention to the elimination of any possible confounds.

Design

In this study, I developed the Implicit Correlation Test (ICT) to measure the level of agreement one may feel in favor or against a series of statements pertaining to defining the rights of LGBTQIA+ in healthcare. The study has an evaluation design to analyze the effectiveness of the video, *To Treat Me, You Have to Know Who I Am*. In contrast, I also used an experimental design as the video attempted to manipulate the variable. An experimental design is often how participants are allocated to the different groups in an experiment and usually contains an experimental group, and a control group, in some way manipulating the variable for the experimental group (14). Furthermore, an evaluation design is "carried out to arrive at an assessment or appraisal of an object, program, practice, activity, or system to provide information that will be of use in decision making" and is used to measure the changes that may arise from the manipulation of the variable (15). In the case of this paper, both designs were used to measure the effect the video can have in altering the participants' beliefs regarding LGBTQIA+ patients. The independent variable of this research is the responses before displaying the video and the number of people with

similar results (the percentage of people that believe one way). The dependent variable is the number of responses that changed following the display of the video.

Method

The method utilized in this report integrates a quantitative data method that addresses the what, or how many aspects of an issue. The responses before the video were organized into one bar graph and a separate graph was used to show the responses following the video. I then calculated the percent change for each response (see findings). With a quantitative research method in addition to an experimental and evaluation design, the method enabled “the ability to replicate both the test and the results” (16). In doing this, I saw how the video played a role in changing one’s opinion as I replicated the prior statements.

Participants

The participants included in this study are healthcare professionals of varying ethnic, racial, and sectional backgrounds to understand if the existing preliminary biases and the extent to which they change within the experiment may depend on one of these variables. I asked for the participants’ current religious affiliation, gender, and ethnicity (see Appendix). However, a specific ethnicity, sex, age, income level, etc., was not necessary to participate in the study. All participants are current healthcare professionals that have worked directly with patients for four years or greater, and their biases regarding sexual orientation were unknown before the study.

Procedure

Initially, I composed an email template that I sent to multiple healthcare professionals including their level and approval for consent and a two-week deadline in which the providers alerted me of their willingness to participate honestly in the survey. Furthermore, following consent from the healthcare providers, participants of the study were sent an email with a series of nine statements where they had to select a number between one and five, representing their level of agreement with the statement. The options ranged from *strongly disagree* to *strongly agree*. In formatting this, I created the Implicit Correlation Test (ICT) which has statements based upon the attitudes the participants hold regarding LGBTQIA+ treatment and opinions on the importance of their embracement and accommodations of care. In a similar manner to Cristina M. Cardona’s *Assessing Teachers’ Beliefs About Diversity in Personal and Professional Contexts*, the scale was utilized before and after translation from English to Spanish, removing the possible aspect of a misunderstanding or misinterpretation in reading and writing in various other languages (17). Following this, I utilized the ICT both before and after the participants watched the video, *To Treat Me, You Have to Know Who I Am*, which presents the first-hand healthcare disparities experienced by LGBTQIA+ patients as well as the changes they believe should be made in order to make people aware of the LGBTQIA+ rights they believe to be included in human rights (1). Following the display of the video, the participants then had another opportunity to answer the same ICT questions and understand if the video created a change in perspective of understanding of the LGBTQIA+ community. Furthermore, I left an opportunity at the end of the scale, if the participants chose, to describe their

experiences and thoughts following the video and if they felt the video aided in their understanding of the issue, or if the video did not alter their responses. This section was optional and was only responded to if the participant felt their experience could be shared with anonymity, or if they believed the data or questions had specific limitations that limited their experience. Along with this, there was another section in which the participants marked if they felt uncomfortable or did not want their results shared which I then removed their results from the responses. Furthermore, I collected the responses and ordered the statements in a form of a bar graph (see findings) that showed the number of participants that *agree*, *disagree*, or were in between prior to the video and whether or not the video had an effect on the results.

Findings

This section discusses the results of the above method and the ways in which I chose to organize the data and the relationships among the variables. Furthermore, the section includes the organization of the statements into categories that establish their intended purposes.

Survey Responses

Nine statements (see Appendix) regarding LGBTQIA+ care were presented to 27 participants both before and after presenting the video, *To Treat Me, You Have to Know Who I Am*. A mixed-method approach was utilized for three participants that chose to participate in an interview by video call to discuss their experiences on how the video may or may not have altered their perspective or bias. I used both their quantitative results from the ICT and an interview to assess and qualitatively assess their experiences when taking the ICT and any background knowledge they had or knew regarding the issue. No participants chose to remove their responses when asked at the end of the survey.

The ICT Test (Figure 1)

The Implicit Correlation Test (ICT) was built in order to understand the extent to which certain factors contributed to the consistency of responses and what influenced these responses to change. For instance, within the test, I asked for outside factors such as religion, race, and other core foundational beliefs that the participants were willing to share (see Appendix).

Figure 1 displays the responses prior to the video ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Statements one, two, three, four, eight, and nine were developed in favor of LGBTQIA+ representation, whereas five, six, and seven were skewed against their representation. The highest percentage of strong agreement was 33.3% in statement eight "Required questions in pediatric care should include personal connections or awareness of gay/lesbian lifestyles" which was a statement generally targeted in favor of LGBTQIA+ care; however, following an interview with participant four, it was stated that the statement can "be seen both ways" as those required questions can be against the representation and promotion of LGBTQIA+ care. Statement seven had the greatest level of strong disagreement and was "Society should not be more accepting of gay/lesbian lifestyles" at 25.9%.

Workplace and Professional Beliefs

Statements one, two, three, six, eight, and nine were statements of workplace and professional beliefs and manners, in which respondents chose how LGBTQIA+ patients or employees should be depicted in healthcare facilities. Within statements one, two, eight, and nine, the most common response was *agree*, at 44.4%, 70.4%, 44.4%, and 51.9%, respectively. On the other hand, for statement three, the most common response was *neutral* (74.1%) and for statement six it was *disagree* (51.9%).

Personal Beliefs

Statements four, five, and seven were statements of personal beliefs. The most common response for statement four was *agree* (37.0%) and for statement 5 it was *neutral* (48.1%). For statement seven, both *neutral* and *disagree* had an equal percentage of 33.3%.

The ICT Test (Figure 2)

Figure 2 displays the ICT responses following the preview of the video. The greatest amount of change in responses was shown in statement one "Gender terms, such as "sir" or "ma'am" should be avoided when addressing patients," going from its high in figure 1 at 44.4%, *agree* to 70.4% *agree*, with seven participants changing their previous response. The least amount of change was in statement five "Same-sex couples should not be allowed to raise and educate children" with only 1 respondent changing their response from *agree* to *neutral*, causing a 3.8% change from the responses prior.

The six statements of professional beliefs presented their greatest percent change in statements one and six, with 26% and 22.2%, respectively. On the contrary, the statements with the lowest percent change in this category were statements three, eight, and nine due to a 6.9%, 11.2%, and 11.1% change.

The three statements of personal beliefs displayed the greatest percent change in statement four due to a 22.3% change. Statement five received a 3.8% change and statement seven received a 7.4% change.

Analysis

This section analyzes the data in the section above (see findings) and applies the data collection to the research question and its ability to address the research gap. Furthermore, it delves into the meanings of the polarized statements, or the ones with the most consistent, or inconsistent responses among the participants.

ICT Test

Based upon the given responses, the ICT has been depicted as a means of determining the extent to which biases surrounding LGBTQIA+ healthcare can be assessed. The experiment analyzed how LGBTQIA+ biases changed within a short period of time and the types of responses that people were more or less likely to reconsider after watching a short video, promoting awareness of LGBTQIA+ care by means of personal anecdotes and emotional appeal. Consequently, it was found that based upon my composition of the ICT test, the participants' responses were more likely to change when presented with a

professional belief rather than a personal one, as these were more targeted toward possible lifelong beliefs, or possibly more politically based. Furthermore, based upon the way the test was created, the most likely responses to change were ones directly addressed in the video, such as personal pronouns and the usage of “sir” and “ma’am” within a professional environment. However, a limiting factor in the ICT test was the component of time, as the test only depicted an alteration of responses over a short, 10-minute period. Based upon my results, and disregarding how these results may have changed over the course of a week, a month, etc. it can be understood that the acknowledgment of LGBTQIA+ care can be improved upon in healthcare centers by the usage of personal connections, anecdotes, and other stories that share personal encounters of LGBTQIA+ bias. Furthermore, the responses that received the least amount of change were also due to clarity and varying interpretations of the statement. Statement 3 was the statement of the least amount of change and when asked, participant 3 alluded this to as the “professionalism of the action.” The statement referred to the mentioning of a provider’s sexual orientation; however, this participant felt that sharing or having a patient question personal information, such as sexual orientation or race may seem “unprofessional” in a professional setting and stated that this “may bring offense to a health care provider.” Thus, proving the lack of changes in responses from before and after the video. Moreover, the *To Treat Me, You Have to Know Who I am* video addresses the sensitivity of the subject and how it is not relevant to showing one’s respect in which one person states how “it is not about sensitivity” but rather “about respect” and “a humanitarian response to human beings” (1, 5:11). This depicts a contributing factor to the primary alteration in the aforementioned “professional” statements, as participant 1 revealed that “all healthcare providers pledge and want to show respect to their patients” and treating them in the correct and most respectful way is understanding their chosen sexual orientation and having no implicit or explicit judgment about it. Thus, this is representative of the necessary problems that healthcare facilities should address when training healthcare providers, as some may even have implicit, or unaware, biases that they express toward their patients. In response, *To Treat Me, You Have To Know Who I Am* can be a beginning element to this process.

Figure 2

As aforementioned, solely based upon the findings (see figure 2) it can be determined that professional beliefs were more likely to change in comparison to “personal” beliefs. The “personal” beliefs presented in the survey were targeted toward the participants’ own biases that may have been accumulated from anywhere, broadly questioning the participants’ personal view of LGBTQIA+ people, rather than LGBTQIA+ care. In contrast, the “professional” beliefs targeted the participants’ perspective specifically on LGBTQIA+ healthcare and the ways in which they should apply that care in the healthcare setting. According to the data presented in figure 1 (see findings, page 9), initially, the professional beliefs had more of an overall agreement that LGBTQIA+ care should not be limited and should be promoted by healthcare workers and was further promoted by the changes seen in figure 2 as the professional beliefs had more changes, with the exception of the statement targeting personal pronouns. However, according to participant three, in an interview, it was stated that statement four could also be targeted as a professional belief as pronouns to describe patients are needed in the workplace, hence making the statement apply to both categories.

Furthermore, it was acknowledged that the professional beliefs were more likely to be altered as they do not reveal the personal beliefs of the healthcare workers and promote the professional environment of a healthcare center. Therefore, based upon the data in both figures 1 and 2 it can be observed that the professional beliefs, which targeted LGBTQIA+ healthcare specifically, could be promoted short term with the usage of the video *To Treat Me, You Have to Know Who I Am*. Additionally, however, participant 2 in an interview called attention to the lack of knowledge presented to many professionals regarding the proper ways to handle situations with those of a different race, sexual orientation, family status, etc. Although healthcare providers may feel no bias toward or against LGBTQIA+ patients, they may not feel comfortable having a discussion about it and possibly “offending” or saying the incorrect thing. Thus, the interviewee addressed and advocated for the possible mandatory implementation of cultural and sexual orientation information seminars or meetings in which healthcare providers would be trained or taught the proper ways in which they needed to make all patients feel comfortable. Although the equal treatment of patients is addressed before offering professionals a position and in training, providers may feel afraid that they may handle the situation incorrectly and make a patient feel uncomfortable if not trained in the correct way. Subsequently, US hospitals and other healthcare facilities should implement mandatory sessions in which they address the proper ways to communicate with everyone and treat everyone in the workplace and all patients with the same level of respect.

Conclusion

Studying the effects of implicit bias on medical students and other healthcare providers who work with LGBTQIA+ populations addresses a critical gap in prior research. Some of the effective strategies identified were those that improved understanding of healthcare needs, increased positive attitudes toward LGBTQIA+ patients, and increased comfort when working with them. Researchers and educators seeking to reduce both explicit and implicit bias towards certain patients among healthcare students can use this as a guide to help them become aware of and mitigate their biases that may affect the health of their patients in an unintended way. Increasing access to care for LGBTQIA+ populations and reducing health disparities requires strategies that reduce bias among students and providers. As a consequence, due to the percent change in the aforementioned responses, it can be concluded that specific forms of training such as educational interventions and group seminars can be utilized in US healthcare facilities in order to control and address biases to some extent. However, in my study, I only utilized a video and did not test other sources in order to see if other methods would be more beneficial, and thus, more research would need to be completed in order to measure the extent of success of these methods.

Future Implications

Research like the present study can contribute to current research on LGBTQIA+ biases in healthcare by identifying how a certain method of mitigation can play a role in creating a more comfortable and accessible environment for patients of all sexualities. As mentioned in the literature review, health care discrimination can threaten lives by delaying or denying medically necessary care. In creating an experiment where an educational video is presented, I was able to analyze the extent to which the biases

can be reduced, which can later be translated into a healthcare provider's treatment in a professional setting. As a result, healthcare facilities will be able to provide the best educational opportunities for their providers to learn how they can provide care in a comforting and respectful manner as they understand what has worked and what has not. If the video was unsuccessful and I got a smaller alteration in responses, it could have been proven that a video is a disadvantageous approach to bias mitigation. Using this research, healthcare can be more equitable and inclusive for people of all sexes, sexual orientations, gender identities, and gender expressions by educating caregivers and the public about the challenges facing the LGBTQIA+ community.

Limitations

The greatest limitation in my research was seeing the extent to which time may play a role in maintaining or changing bias. Because I was unable to see how the responses may have changed over a longer period of time, I could not see if the participants' opinions and views on healthcare could change for a longer period of time or if it is only for that time that the participant is participating in the survey. Thus, I could not see if the ICT would be able to be effective in mitigating bias for a longer period of time and if this method would be able to work long term in any healthcare facility. Moreover, another limitation may be the impact of the framing effect. Amos Tversky and Daniel Kahneman, authors of *The Framing of Decisions and the Psychology of Choice*, describe the framing effect as a type of cognitive bias in which one's choices are dependent upon the way they are framed whether that be through the wording, setting and situation (18). This impacts my research as the statements in the ICT could have been perceived, interpreted, and understood in a different way than intended based on their wording. According to the findings of Tversky and Kahneman, studies have shown that even the slightest variation in the phrasing of statements can greatly affect responses. This could have affected the accuracy of my study as the ways in which I framed the nine statements could have appealed differently to each participant. Lastly, the sample size of my data collection was only 27 participants in Katy, Texas. Therefore, the small size of participants in my study may have contributed to my formation of a conclusion that may not be entirely accurate (19). In regards to the location, all participants resided in Katy, Texas while the survey took place, which may have affected their willingness or reluctance to understand other belief systems, and the environment they live in may impact their perspectives on LGBTQIA+ patients and healthcare.

Declarations

Ethics approval and consent to participate

All methods were carried out in accordance with the BMC Medical Education guidelines and regulations. All experimental protocols were approved by the KatyISD Campus Institutional Review Board on December 13, 2021. Informed electronic consent was obtained and accepted from all listed participants for both the online survey and optional interview.

Consent for Publication

Not applicable

Availability of Data and Materials

All data generated or analyzed during this study are included in this published article in the *Findings* section.

Competing Interests

Not applicable

Funding

Not applicable

Authors' Contributions

The author, Kate Mirielle Pasia, confirms sole responsibility for the following: study conception and design, data collection, analysis and interpretation of results, and manuscript preparation.

Acknowledgements

Not applicable

References

1. NYC Health and Hospitals. LGBT healthcare training video: "To Treat Me, You Have to Know Who I Am" [Video]; NYC, 2011 <https://www.youtube.com/watch?v=NUhvJgxgAac>.
2. Hinton, P. Implicit stereotypes and the predictive brain: cognition and culture in "biased" person perception. *Palgrave Commun* 3, 17086; 2017. <https://doi.org/10.1057/palcomms.2017.86>
3. WMA - The World Medical Association-WMA Declaration of Geneva. The World Medical Association; 2017. Retrieved from <https://www.wma.net/policies-post/wma-declaration-of-geneva/>
4. Harris, G. Cultural Competence: Its promise for reducing healthcare disparities. *Journal of Health and Human Services Administration*. 2010; 33(1), 2-52; <http://www.jstor.org/stable/25790773>.
5. Flaskerud, J. Ethnicity, culture, and neuropsychiatry, *Issues in Mental Health Nursing*. 2000; 21:1, 5-29. DOI: 10.1080/016128400248248
6. Kapur, N. Unconscious bias harms patients and staff. *BMJ: British Medical Journal*. 2015;351. Retrieved from <https://www.jstor.org/stable/26523588>.
7. Klotzbaugh, R., & Spencer, G. Magnet nurse administrator attitudes and opportunities: toward improving lesbian, gay, bisexual, or transgender-specific healthcare. *The Journal of Nursing Administration*. 2014;44(9), 481–486.. <https://www.jstor.org/stable/26811771>

8. Kates, J., Ranji, U., Beamesderfer, A., Salganicoff, A., & Dawson, L. Health and access to care and coverage for lesbian, gay, bisexual, and transgender (LGBT) individuals in the U.S. - health challenges. KFF; 2018.
9. Projectimplicit. About the IAT; 1995. Retrieved from <https://implicit.harvard.edu/implicit/iatdetails.html>
10. Morris, M., Cooper, R. L., Ramesh, A., et al. Training to reduce LGBTQ-related bias among medical, nursing, and dental students and providers: a systematic review. *BMC medical education*. 2019;19(1),325. <https://doi.org/10.1186/s12909-019-1727-3>
11. Penner L.A., Dovidio J.F., Hagiwara N. An analysis of race-related attitudes and beliefs in black cancer patients: implications for health care disparities. *J Health Care Poor Underserved*. 2016;27(3):1503– 1520.
12. Heath, S. Does implicit racial bias affect patient-provider communication? *PatientEngagementHIT*; 2020.
13. Hogg, M.A. Social identity theory. *Understanding Peace and Conflict Through Social Identity Theory*. Peace Psychology Book Series. Springer, Cham; 2016. https://doi.org/10.1007/978-3-319-29869-6_1
14. Mcleod, S. Experimental design | simply psychology. *Simply Psychology*; 2017. <https://www.simplypsychology.org/experimental-designs.html>.
15. Kellaghan, T. Evaluation research - an overview | *Sciencedirect topics*. Science Direct; 2010. <https://www.sciencedirect.com/topics/medicine-and-dentistry/evaluation-research>.
16. DeVault, G. Here are the advantages and disadvantages of quantitative research. *The Balance Small Business*; 2020. <https://www.thebalancesmb.com/quantitative-research-advantages-and-disadvantages-2296728>.
17. Cardona, C. M. Assessing teachers' beliefs about diversity in personal and professional contexts; 2005.
18. Tversky, A., & Kahneman, D. The framing of decisions and the psychology of choice. *Science*. 1981; 211(4481), 453–458.. <http://www.jstor.org/stable/1685855>
19. Faber, J., & Fonseca, L. M. How sample size influences research outcomes. *Dental press journal of orthodontics*; 2014;19(4), 27–29. <https://doi.org/10.1590/2176-9451.19.4.027-029.ebo>

Figures

Fig 1: ICT Survey Responses Before Presenting Video

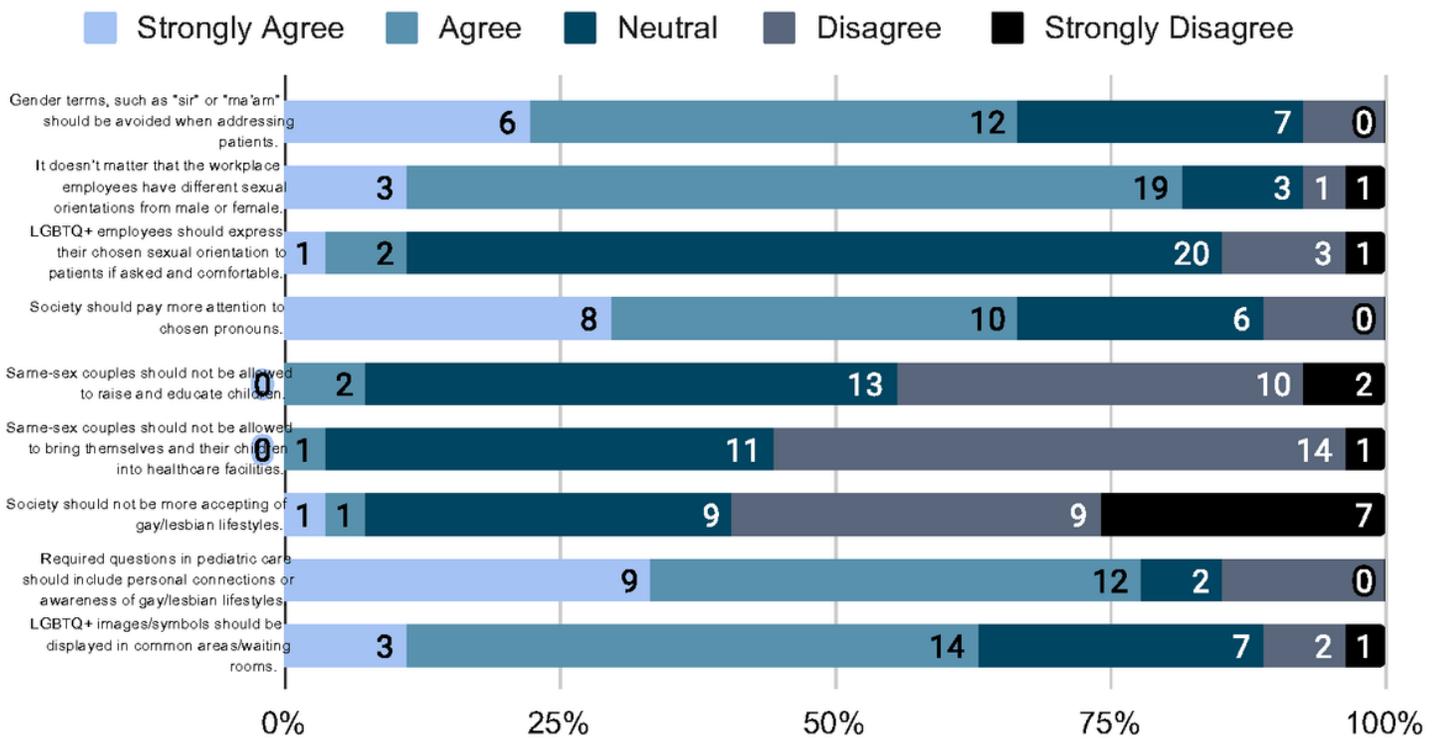


Figure 1

See image above for figure legend.

Fig 2: ICT Survey Responses After Presenting Video

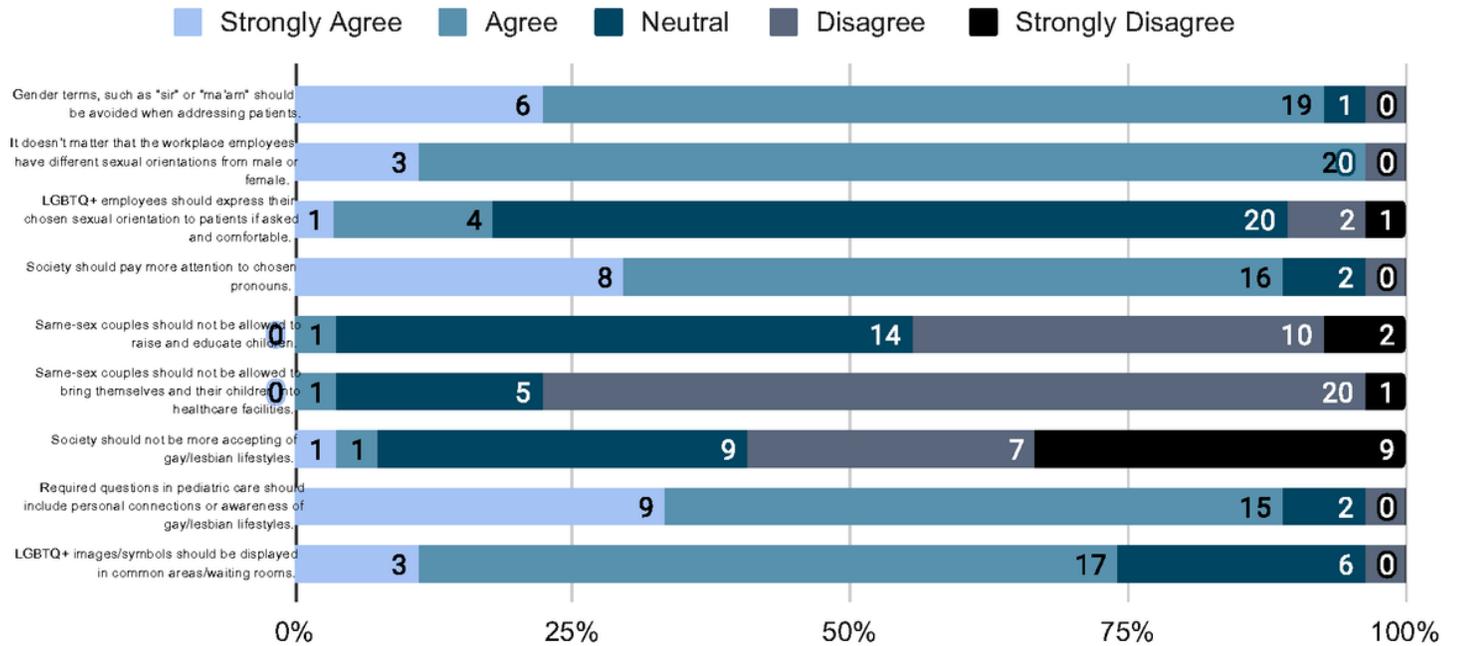


Figure 2

See image above for figure legend.

Supplementary Files

This is a list of supplementary files associated with this preprint. Click to download.

- [appendix.docx](#)